

VII.—Note on the occurrence of Fossil Bones in the Sewalik Range, eastward of Hardwar. By H. FALCONER, M. D., Superintendent Botanical Garden, Seharanpur.

[See Proceedings As. Soc. 5th April.]

The *Sewalik* fossils have hitherto been found chiefly on the tract between the *Jumna* and *Sutlej*, and more sparingly in the clay marl between the *Jumna* and *Ganges*. There is no apparent reason why they should not be found in abundance in the protraction of the range which stretches eastward of the *Ganges* behind *Rohilkhand* and *Oude*. But it is of some interest to ascertain the fact in unexplored parts of the range, where they do exist, and where they do not. The fossils mentioned in the following list have been collected near *Hardwar* and in the low hills eastward of the *Ganges*, which skirt the province of *Kemaon*. The list contains nothing new: but it proves the occurrence of fossils where they had not been found before, and increases the probability of finding them still further to the eastward:

*Mastodon Elephantoides*—molars.

*Rhinoceros*—molars.

*Hippopotamus Sivalensis*—molars and tusks.

*Hog*—fragments of jaws with teeth.

*Horse*—molars.

*Ox*—teeth and other bones.

*Deer* of several sizes—jaws, teeth, astragali, horns, &c.

*Crocodyles*—*Garial*, } several fragments of jaws, teeth, and buckler  
*Magar*, } plates.

*Tortoises*—*Emys*, }  
*Trionyx*, } numerous fragments.  
*Testudo*, }

*Coprolites*.

This list comprises a large part of the species found westward of the *Jumna*. The specimens are generally broken up into small pieces, greatly more so than in the *Nahan* tract. The largest fossil procured has been the plastron of a testudo 17 inches long. The bones are found in three states of fossilization, exactly resembling those from the westward of the *Jumna*; viz.

1st. The "soft" fossil; the animal matter removed, but the earthy constituents of the bones unaltered, and slowly soluble in diluted muriatic acid: occurring in beds of clay, and the cavities of the bones filled with the matrix. The specimens of this variety are very few.

2nd. The "hard" fossil, with a silicious or calcareous impregnation: the animal matter and earthy constituents entirely removed: occurring in sandstone matrix.

3rd. The "black" fossil, like the last, but impregnated with hydrate of iron: occurring in sandstone, or in a calcareo-argillaceous matrix.

No shells have yet been brought in.

VIII.—*Report Progress of the Boring Experiment in Fort William.*  
By Major T. M. TAYLOR, 5th Cav.

[Read at the Meeting Asiatic Society, 5th April.]

The immediate superintendence of the boring experiment having, in consequence of my removal from Fort William, passed into other hands, I think it necessary to acquaint the Society with the progress that has been made since I had the honor to submit to them a note on the subject in June last. (See Proceedings As. Soc. vol. V. p. 374.)

At that time a depth of 175 feet had been attained by the borer, which then worked in a coarse sharp sand mixed with pieces of quartz and felspar, and from the little progress made, it was supposed a bed of gravel or shingle had been reached. This supposition, however, proved erroneous; for after some delay the work advanced, until, the borer having gained  $178\frac{1}{4}$  feet, and the tubes being forced down to  $180\frac{1}{2}$  feet, they were observed soon after to have sunk by their own weight, and thenceforward up to the present time they have continued so to sink, maintaining a depth generally a few feet in advance of the auger.

It is remarkable that, although it was frequently tried, it was seldom found practicable to *force* the tubes down more than an inch or two at a time; yet, shortly after the removal of the pressure, amounting, possibly, to twenty tons, they would sometimes descend six inches or even a foot by their own gravity.

With a trifling variation in the color and fineness of the sand the stratum remained the same, until clay was found at  $198\frac{3}{4}$  feet, but this stratum was not more than five feet in thickness; five feet of sand then occurred, and after it another layer of clay. At 212 feet a bed of sand was entered, which has been penetrated to a depth of 131 feet, without reaching its termination.

Long ere this the work would have been carried to the utmost depth for which tubing of the diameter in use has been provided, had it not been for two accidents, each of which was of so serious a